Montgomery L'Energia Power Partners, LP
Industrial Wastewater Discharge (BWP IW 38) Application

IWPS Description

Transmittal No. W229142

The IWPS consists of two 27,000-gallon neutralization tanks with mixing ejectors, two mixing/discharge pumps, instruments, interlocks and controls. The pH of the waste water is adjusted to between 6.0 and 9.5 by adding sulfuric acid or caustic prior to discharging to the sewer. The neutralization system is operated and controlled using a programmable logic controller and local CRT based control panel interface. The neutralization tanks collect:

(1) Regeneration waste water from the cation exchangers, anion exchangers and mixed bed exchangers. The cation, anion and mixed bed ion exchange columns that are used to produce deionized water for use in the boiler are regenerated on a routine basis. Dilute aqueous solutions of sulfuric acid and sodium hydroxide are used as regenerant solutions. After use, the spent regenerant solutions are combined in the neutralization tanks. Any additional pH adjusting agent still needed (either acid or caustic) is added as required to bring the solution pH to within the allowable range for sewer discharge.

(2) Continuous blowdown from the HRSG. A portion of the water used in the HRSG (previously treated with oxygen scavengers, corrosion inhibitors and biocides) is continuously blown down to the sewer in order to control the chemical composition of the water and the resultant steam. The blowdown first passes through a heat exchanger in order to cool the water within discharge limits, before proceeding to the neutralization tank. The continuous blowdown flow to the sewer is approximately 2 gpm, on average.

Once neutralized, the IWPS-treated water passes to a blowoff tank, where it is used to cool hot process wastewater that did not require pretreatment. The resultant mixture then proceeds to the city sewer. Each of the two neutralization tanks may also be discharged directly to the city sewer if required.